

The Use of ICT in Distance-Learning in Nigeria: Strategies for Improvement

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Paper Submission Date: 5th December 2016

Paper Acceptance Date: 3rd February 2017

Paper Publication Date: 6th February 2017

Abstract: This paper seeks to discuss on the use of ICT in distance-learning and the strategies for improvement in Nigeria. ICT is used to refer to technological tools that are used to create, store, retrieve and disseminate information globally. Its benefit to diverse aspects of developments especially in technology are enormous ranging from offering flexibility in learning to making teaching and learning instant, without classroom walls. Distance learning is the use of ICT in teaching and learning without the classroom walls, at the learner's time and location. The effective use of ICT in distance education could be hindered by interrupted unreliable electric power supply and unsteady net work service. Some suggested strategies that could be adopted to improve upon successes made so far were the use of expertise approach in developing distance learning course content and putting in place good quality control measures to check the materials, content and human resources used in distance learning programmes.

I. INTRODUCTION

The teaching-learning process has been facilitated by the information and communication technology making it possible to learn without the walls of the traditional classroom and mostly without a physical human teacher. Today learning can take place anywhere and at any time the learner is ready to learn. Information or learning content can be transferred using the modern communication systems via recent technologies. Distance-learning has been propelled by ICT and its future height is unimaginable.

The discussion in this paper will be done using the following sub-headings:

- Defining ICT and distance learning.
- The advantages of ICT in distance learning.
- Hindrances to the effective use of ICT in distance learning.
- Strategies for improvement on the use of ICT in distance learning.

Meaning of ICT

ICT stands for Information and Communication Technology and is defined as a diverse or set of technological tools and resources used to communicate, create, disseminate, store and manage information. These technologies include computers, the internet, broadcasting technologies (radio and television) and telephony. (wikibooks, retrieved on line 15/3/ 2016) ICT are advances in technologies that provide a rich global resource and collaborative environment for dissemination of ICT literacy materials, interactive discussions, research information and international

exchange of ideas. (Nwachukwu et al, 2007) Gay and Blads (2005), define ICT as the effective use of equipment and programs to access, retrieve, convert, store, organize, manipulate and present data and information

The above definitions indicate that ICT covers any product that will store, retrieve, manipulate, transmit or receive information electronically in a digital form eg personal computers, digital television, e-mail or any technology that facilitates the transfer of information and various types of electronically mediated information. (Wikipedia: retrieved online 15/3/2016) These products serve as the wings with which distance learning fly, without ICT the best of distance learning would have been mail correspondence learning which comparatively has a snail speed.

Meaning of Distance Learning

Distance learning education, also called open or distance learning is a form of education in which there is normally a separation between teachers and learners. It is a form of delivering education and instruction, often on an individual basis to students who are not physically present in a traditional setting such as a classroom. It incorporates the printed and written word, the telephone, computer conferencing or teleconferencing to bridge the physical gap between the instructor and the learner (Nwachukwu, et al, 2007). Distance learning eliminates the constraint of space which the traditional learning environment has been identified with. The Education for All millennium development goals on education will be a mirage if teaching and learning would only be within the confines of a school building. Learning opportunities (skills, information, knowledge) are now made accessible to any interested learner.

The Federal Government of Nigeria (2004) defines Distance Education as the mode of teaching in which learners are removed in time and space from the teacher. It further says it uses a variety of media and technologies to provide and improve access to good quality education for large numbers of learners wherever they may be. The goals of distance learning Education as stated by the Federal Republic of Nigeria (2004) are to:

1. Provide access to quality education and equity in educational opportunities for those who otherwise would have been denied;
2. Meet special needs of employers by mounting special certificate courses for their work place;
3. Encourage internationalization especially of tertiary education curricula;

4. Ameliorate the effect of internal and external brain drain in tertiary institutions by utilizing Nigerian experts as teachers regardless of their locations or place of work;

search engines then all the knowledge that you needed for that will be brought to you from all over the world.

ICT in distance learning opens up educational opportunity to those who because of distance, physical inadequacies and work commitments cannot make them available for normal schooling. It is a flexible medium of instruction adaptable to any level of education. Young students as well as adults can learn through this medium of instruction to obtain a higher certificate or degree. (Onasanya, 2014)

Social learning/interactions: online students meet with peers all over the world to get information that have to do with their studies. They can meet through conferencing and other media and online chats. This would have been more rigorous, time consuming and expensive without ICT. Yusuf (2005) confirms that ICT provides opportunities for distance education students, academic and non-academic staff to communicate with one another more effectively during formal and informal teaching and learning.

Saves time and money: distance learning through ICT is made relatively cheaper when compared with the normal school system due to the fact that certain huge overhead outlays are not incurred. E.g. the cost of building physical structures and employing a considerable number of teachers to cater for the students. Again, it saves students a significant amount of money as opposed to traditional education. The cost of student's transportation and accommodation is being removed by the availability of ICT and distance learning.

Reflective learning: with the use of ICT distance-learning students can listen or go through a lesson online severally thereby attending to areas that require more attention personally.

Vivid evidence: objects and scenarios that would have been a mirage are vividly made available online. E.g. a student of zoology does not need to travel to see animals in their natural habitat nor one studying oceanography go into the deep sea. ICT through documentary evidence on CD, online pictures etc takes away the risk and yet presents the required sights.

Instant information: ICT gives instant information to the distant learner either through the pocket device or personal computer whenever he/she is in doubt. He can phone an expert, a colleague or connect to the internet and get the necessary up to date information that is required.

Unrestricted boundaries: Classroom walls are broken down with the use of ICT and this is one of the things that distance learning seeks to achieve. The whole world is made an open classroom. This explains why it is called Open Distance Learning (ODL). Knowledge is made available from all over the world to the learner just at any beck and call.

Hindrances to effective use of ICT in distance - learning

There are a number of factors that seem to hamper the effective use of ICT in distance learning education in Nigeria, they include:

Unsteady electric power supply: distance learning depends largely on ICT and the functionality of ICT is totally dependent on electricity. Therefore when the supply of electric power from the national grid is inadequate or totally absent ICT beneficiaries will take to an alternative power supply which often times is more expensive. This has been a serious setback to the advancement of distance learning.

McBrien, J. L., Cheng, R. & Jones P. (2009), identified two modes of delivery in distance learning, they are:

- i. synchronous instruction mode
- ii. asynchronous instruction mode

In synchronous learning, all participants are present at the same time but not at the same place. This happens for instance when all the learners (e.g. NOUN students all over the country), on pre-information, hook up to the Nigeria Television Authority (N.T.A.) by 6.30 p.m. for lessons. In this regard it resembles the traditional classroom teaching methods even though the participants are located remotely. It requires a time table to be organized. Web conferencing, video conferencing, educational television, instructional television, direct broadcast satellite, internet, radio live streaming are examples of synchronous technologies.

In asynchronous learning, participants access course materials at their own time. Students are not required to be together at the same time. E-mail, video and audio, recordings print materials, voicemail and fax. Mail correspondence, which is the oldest form of distance education is an asynchronous delivery technology. (<https://en.m.wikipedia.org/wikidistanceeducation>)

For any form of learning to take place, there has to be a dissemination and communication of information. Distance Learning would have been very difficult if not a total failure, without an effective and efficient mode of communication. This is where modern technology (ICT) has come to sharpen and quicken the ambiance of distance learning. Most distance learning programmes include a computer-based training (CBT) system and communication tools to produce a virtual classroom because the internet and the World Wide Web (www) are accessible from all computer platforms. They serve as a link for many distance learning systems.

The advantages of ICT in Distance Learning

Distance learning has received so much kudos due to the inputs of ICT based on the following:

Availability: ICT products are more available than most textbooks because it is always handy to the user, information can be received instantly and the internet can be accessed 24 hours and they are relatively cheaper too. Many text books are now available online (e-textbook)

Equal Access: With ICT there cannot be marginalization, quota system or educationally advantaged or disadvantaged group. Just like the sun is seen by all who look up to the sky so ICT makes education available to all who queue in to it, distance notwithstanding. In distance learning, ICT provides equal access to all irrespective of socio-economic status or income, area of residence, gender, age, race or cost per student (Onasanya, 2014).

Flexible and convenient: ICT makes distance learning flexible and convenient by providing portable devices which can be operated anywhere (in the bus, on your bed, while you are waiting etc), anytime (day or night) just at the time learning is required. All you need is to get connected to the internet upload your enquiry or subject matter using any desired website or the

Net work fluctuation and unavailability: over the years there has been a significant improvement in our ICT formations but yet not without gaps. The issue of net work unavailability is almost a norm and this does not go down well for distance learning. Yusuf (2006) identified a shortage and high cost of equipment, software and information compared to situations in the industrialized nations. Without the effective use of technological tools (e-mail, fax, internet, television, radio etc) successful distance education cannot be assured.

Lack of collaboration: UNESCO (1998) identified lack of interregional networking and cooperation among national universities and international institutions. This amplifies the need for partnership and collaboration among institutions of higher learning as heavy burdens become light when they are shared. Collaboration and partnering will broaden the scope of the institutions involved enabling them to achieve more.

Strategies for improvement

ICT in distance learning although novel especially in developing countries has imparted much on the educational development of our nation, but be that as it may, there are yet more to be done to make it achieve more feats. The strategies for improvement are discussed below:

Expertise Approach: Bandalaria (2007) opines that it is necessary to employ a quality circle approach in developing distant learning courses and learning materials. The “quality circle” consists of the **course writer** (who is the subject matter specialist), **subject matter specialist** (another subject matter expert who peer reviews the soundness of the course and its contents), **an instructional designer** (who ensures the chunking of lessons are appropriate and that the programme/course goals contents and assessment mesh logically with one another), **a media specialist** (who recommends appropriate delivery mediums), **a language editor** (who performs copy and substantive editing). In summary whatever the technology used to deliver instruction the quality circle approach to course development should be standard practice.

Quality control: Distance learning education providers must strive to use quality and reliable ICT hard and soft wares supported by highly skilled individuals armed with the knowledge and skills they need to ensure that the hard and software run smoothly.

The institutions offering distance learning education must strive to maintain very high standards e.g. entrance standards, grading standards, course/programme completion standards and conferment of recognized degrees. They must adhere strictly to highest standards in terms of setting academic policies to ensure the integrity of the degrees they offer.

Training: institutions must offer training to various user groups e.g. students, teachers, administrators ect. Offering such training helps to ensure effective and efficient use of ICT for all stages of the teaching-learning process, like accessing online classroom, course registration, managing digital library, manipulating databases to get the needed information etc

Affordability: Access and cost of access must be attainable and affordable for students. While the institutions may find ways to make distance learning technologies available to its staff and personnel, the students must also be considered in the costing. The cost of using ICT such as cost of internet access, sending

SMS, etc must be considered when selecting technologies to support distance learning.

Relevance: Any ICT used in distance learning must relevant to the society and the educational demands (learning content, experience and outcome). Kling (2001) asserts that the design and implementation processes must be relevant to the actual social dynamics of a given site of a social practice and that the substance of design and practice must be relevant to the lives of the people in which they affect.

Collaborations: distance learning institutions should partner and collaborate to reduce cost and enrich the learning experiences for all involved. Two or more institutions can share research and development projects when they have common goals and objectives. Collaboration can reduce cost associated with designing and implementation.

Monitoring and evaluation: distance learning projects must have set goals and objectives as with any meaningful project. There has to be well defined means of attaining the set goals. These standards when set must be consistently monitored to ensure effectiveness and efficiency.

Socialization: socialization which is a vital aspect of learning and human development should be allowed to thrive in order to make distance learning education total. Communication between and among students could be facilitated through the use of cellular phones, via the internet (face book, twitter, whatsapp, etc).

ICT integration: Yusuf (2006) says that at this level of distance education in Nigeria, there is the need for the integration of the new ICT literacy knowledge into academic courses and programmes of our educational institutions. This means that the know-how of ICT operations and manipulations should be an integral part of schools curriculum.

Improved network service: network service providers should ensure that there is functional and quality net work service made readily available and affordable to users.

Improved power supply: the epileptic and sometimes non-availability of electric power supply has been a tradition in our country. If we must benefit from the proceeds of ICT, our leaders have to take the provision of uninterrupted power supply as a task that must be done. Without electricity there can be no ICT and this will be a minus for distance learning.

Summary

Information and Communication Technology (ICT) encompasses the effective use of equipment and programs to access, retrieve, convert, store, organize, manipulate and present data and information (Gay and Blads, 2005).

Distance learning breaks the bounds of the traditional classroom. This is made possible through the products of ICT. ICT enhances learning via the internet, eliminates the constraint of time as learners have unlimited access to knowledge and information on the world wide, web, gives students the opportunity to reflect on previous lessons, gives immediate feedback, saves time and ,money etc there are still more grounds to cover. The strategies for improvement as stated in this paper are that: only expertise should be allowed to prepare the curriculum content, the instructional materials, the expected learning experiences, evaluation and the feedback processes for distance learning.

There should be quality control and evaluation, training and retraining of staff, facilitators, personnel and others .

Conclusion

Successful distance learning cannot be assured without the use of effective information and communication tools. Though distance learning is gradually taking a stand on the global stage of ICT and with the on goings of the National Open University of Nigeria, the real innovative use of ICT is yet to be achieved. But suffice it to say that ICT make distance learning to soar because of its many technical advantages.

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